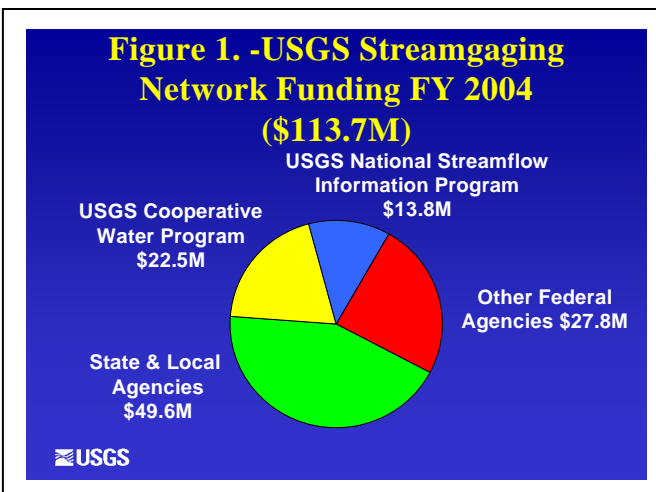
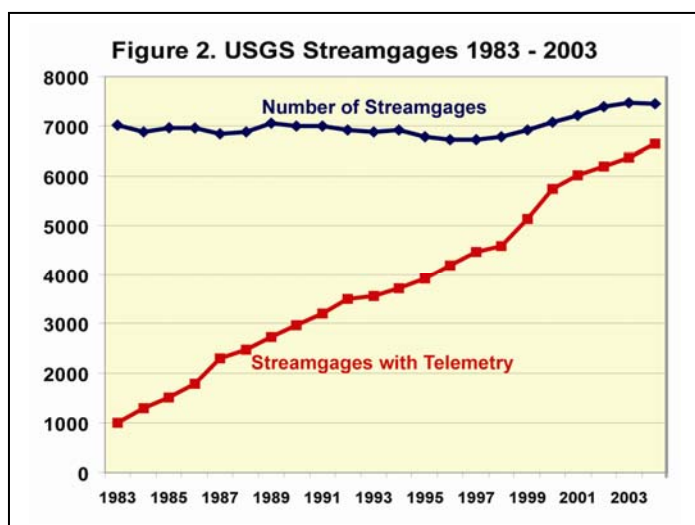


USGS National Streamflow Information Program – 2005 Update

The National Streamflow Information Program (NSIP) provides the Nation with streamflow information to help protect life and property from floods and manage our water resources and aquatic environment. The streamgaging network is supported by four funding sources: the USGS Cooperative Water Program, the USGS NSIP, other Federal agencies (primarily the Corps of Engineers and Bureau of Reclamation) and 800 State and local funding partners (figure 1). The last two sources currently account for about 67 percent of the streamgaging network funding.



In 2004, the USGS operated about 7,400 streamgages. This number has been rising slightly in recent years (figure 2). However, because the current streamgaging network depends heavily on partner interests and funds, there are often significant year-to-year changes in individual streamgages in operation causing instability in the network. While the network may be growing slightly in some parts of the Nation, there are other areas where significant numbers of important long-term streamgages are being discontinued due to a lack of cooperator funds. Table 1 shows the number of streamgages lost in a few specific parts of the nation in 2004 due to reductions in funding from major partners in these areas. The USGS has been unable to locate other funding partners to support these streamgages and has inadequate funds in the NSIP to maintain them. Not only are there a large number of streamgages being discontinued, but those streamgages also account for a substantial percentage of the network in each area. There is a vast amount of information accumulated through the records of these streamgages. The longest period of record for these discontinued streamgages is 84 years, and the average is nearly 34 years.



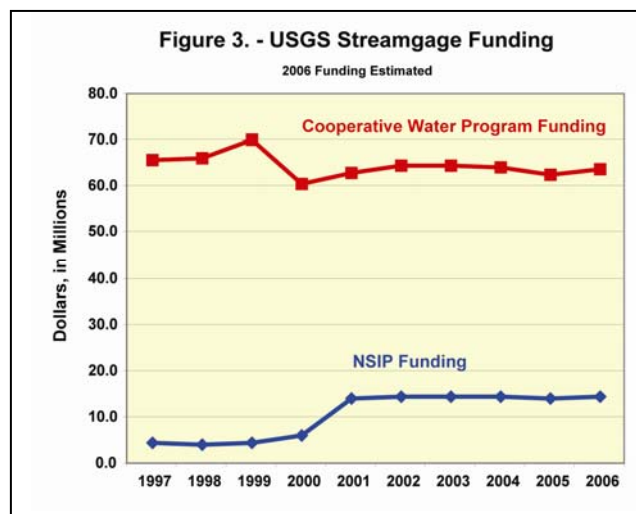
Network instability also reduces the potential value of streamflow records for most infrastructure design applications and environmental assessments. Long records of streamflow are vital to the characterization of regional hydrologic conditions (for purposes of water supply planning and for flood hazard assessments) as well as for documenting and understanding changes that occur in streamflow due to changes in land use, water use, groundwater development, and climate. However, from 1993 to 2003, 830 critical streamgages with 30 or more years of record

Table 1. Summary of streamgages lost in select area, 2004.

Area	Number of Streamgages Lost	Percent of Streamgaging Network Lost In the Give State or River Basin	Lost Streamgages Average Period of Record, Yrs.
Indiana	23	13	35
Mississippi	11	13	27
South Florida	21	17	30
New Hampshire	7	15	31
Cumberland River Basin, KY and TN	14	40	46

and NSIP. Both programs had slight budget decreases from FY 2004 to FY 2005, and a slight increase is expected in FY 2006 to return funding back to near 2004 levels (figure 3). The budgets of many funding partners also continue to be very constrained.

The USGS continues to make great advances in upgrading streamgages with near real-time data delivery capabilities (figure 2). About 85 percent of the streamgages have telemetry (satellite, radio, or phone) and are now able to deliver data to users in near real-time via the World Wide Web. NSIP is also investing resources into long-term improvements in the overall delivery of streamflow information to users. These improvements include: database enhancements to streamline the computational process and to improve user's access to real-time and historical streamflow information, new assessment methods to define trends and estimate streamflow at ungaged locations, and research and development to measure streamflow more accurately, less expensively, and more safely. For more information on recent improvements, see "U.S. Streamflow Measurements and Data Dissemination Improve", EOS, v. 85, No. 21, May, 2004 or <http://water.usgs.gov/osw/pubs/EOS-Streamflow.pdf>.



The National Academy of Sciences recently completed a review of the USGS's plan for the NSIP (located at <http://www.nap.edu/books/0309092108/html>) that concluded the NSIP was "a sound, well conceived program that meets the nation's needs for streamflow measurement, interpretation, and information delivery" (The National Academia Press, 2004, Assessing the National Streamflow Information Program).

For additional information on the National Streamflow Information Program, contact the program coordinator, J. Michael Norris, mnorris@usgs.gov, 603-226-7847, or visit <http://water.usgs.gov/nsip/>.

were discontinued. The increase in NSIP funding in 2001 reduced substantially the loss of these critical streamgages, from an average of over 75 lost per year to just 28 lost in 2001. The expectation for FY 2005 and 2006 is for additional losses of long record streamgages. This expectation is based on funding levels for the USGS programs that help fund streamgages, the Cooperative Water Program